



UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/224,340 12/31/98 DIMARCO

M A62-17022-US

EXAMINER

MM91/0515

DINH, T

ART UNIT

PAPER NUMBER

JOHN G SHUDY JR
HONEYWELL INC
HONEYWELL PLAZA P O BOX 524
MN12 8251
MINNEAPOLIS MN 55440-0524

2841

DATE MAILED:

05/15/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/224,340

Applicant(s)

DIMARCO, MARIO

Examiner

Tuan T Dinh

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Davies et al (U.S. Patent 4,736,274).

As to claims 1, and 13, Davies discloses a card rack consider as an integrated modular cabinet (column 2, lines 7-8) as shown in figures 1-11 comprising a plurality of printed circuit board modules (PC, column 1, line 50), and a chassis (R, figure 1A). The chassis has a front (IN, figure 1A) and slots (ch1, ch2) to receive the modules. Also, the chassis has top, bottom, and side panels (see figure 1A). The plurality of the printed circuit boards is created a seal with the chassis (column 1, lines 14, 16, 29, 55-56, column 2, and lines 25-39).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-7, 9-11 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies in view of Craker (U. S. Patent 4,716,497).

As to claim 2, Davies discloses and satisfies all of the limitations as above, except for showing a faceplate that comprises the faceplate that has a first end and an opposite second end, and first and second screws attach to the first and second screws. Craker discloses the cabinet wherein each of the modules as shown in figures 5-7 comprises the faceplate (22) that has a first end and an opposite second end, and first and second screws (60) that attach to the first and second ends of the faceplate.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cabinet of Davies and provide the faceplate having fastening members as taught by Craker in order to support for the module securing when the module slide and seal in the cabinet.

As to claims 3 and 4, Davies discloses the cabinet, except for the first and second screws is jackscrews and configured to clutch. Cracker teaches the module having a face plate (22) including the screw (60) configured as jackscrew and clutch for fastening the printed circuit board module to the cabinet. It would have been obvious to

one ordinary skill in the art at the time the invention was made to utilize the screws of Craker and provide the jack-screw and clutch as taught by Craker in order to fasten the module of the rack to the enclosure.

As to claim 5, Davies discloses and satisfies the claimed invention except for the predetermined amount of force is about 70 pounds per screw. It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the force to fastening the screw on the module for secured the module within cabinet, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

As to claims 6-7 and 9-11, Davies discloses the cabinet wherein the module comprises a connector assembly (BP), and the connector assembly includes a plurality of the connectors (B-cc shown in figure 1D). Davies does not show the module that has more than one circuit board that has a first end connected to the faceplate and opposite second end connected to the connector assembly. The connectors with surface mounted leads at position 90 degrees. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cabinet of Davies and provide the module having more than one circuit board, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

As to claims 16-17, Davies discloses the cabinet as shown in figures 1-5 wherein the top and bottom panels are configured with a plurality of ventilation holes (P1-P3) and each of holes is sized (column 1, lines 18-22).

As to claims 19-20, Davies discloses the cabinet as shown in figures 1-5 wherein the top and bottom panels are configured with a plurality of guide rails, and each of one guide rail mounted on the top and bottom panels.

As to claims 14 and 15, Davies and Craker disclose and satisfy all of the limitation of the claimed invention, except for showing the interchangeable of the top and bottom panels and two side of the panels, where a part of the cabinet may be relocated without modification to the operation of the cabinet, such a relocation is considered to have been within the skill of art. *In re Japikse*, 86 USPQ 70 (1950).

As to claim 18, Davies discloses the cabinet including the hole and satisfies all of the limitation of the claimed invention, except for the size of the hole. It would have been obvious matter of design choice to make as small (diameter) as possible to reduce the amount of space, since such a modification would have involved a mere change in this size of the hole. The change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davies in view of Craker as applied to claims as above, and further in view of McKenzie (U. S. Patent 4,002,386).

Davies and Craker disclose and satisfy all of the claimed invention, except for the flexible handle mounted on the faceplate of the module. McKenzie teaches the flexible handle (24) as shown in figures 2 and 3. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cabinet and provide the flexible handle to use to remove the module from the cabinet as taught by McKenzie.

Response to Arguments

Applicant's arguments filed 3/6/01 have been fully considered but they are not persuasive. Applicant argues that Davies fails to teach (1) an integrated modular avionics (IMA) cabinet having a chassis including a plurality of printed circuit board, (2) the chassis has a front wherein said front of said chassis is configured with slots, (3) said plurality of printed circuit board modules creates a seal with said chassis.

Examiner disagrees, Davies clearly teaches (1) a card rack ~~consider~~ as an (IMA) cabinet having a chassis (R, figure 1A) including a plurality of printed circuit board

Application/Control Number: 09/224,340
Art Unit: 2841

Page 7

module (PC, column 1, lines 50-57), (2) the chassis has a front (IN, figure 1A) wherein said front is configured with slots (ch1, ch2), and (3) said plurality of printed circuit board modules creates a seal with the slots of said chassis (column 2, lines 14-39)

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shumaker et al, Nemoz, Zucchi et al, and Nicolici et al disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 703-308-3301. The fax phone numbers

Application/Control Number: 09/224,340

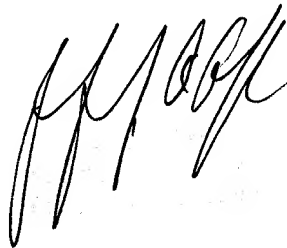
Page 8

Art Unit: 2841

for the organization where this application or proceeding is assigned are 703-308-3431 for regular communications and 703-308-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD
May 13, 2001

A handwritten signature in black ink, appearing to be "H. H. H. H.", is located in the center-right of the page.